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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/075,145

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Bruce E. Dunne

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02/03/2006

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EXAMINER

TRAN, KHANH C

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/075,145

Applicant(s)

DUNNE ET AL.

Examiner

Khanh Tran

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-119 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-26, 32-57 and 63-119 is/are allowed.
- 6) ☒ Claim(s) 27-31 and 58-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

1. The Amendment filed on 11/23/2005 has been entered. Claims 1-119 are pending in this Office action.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 27-31 and 58-62 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 27-28, 31, 58-59 and 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Huh et al. U.S. Patent 6,791,976 B2.

Regarding claim 27, in column 3 lines 35 -65, referring to diagram FIG. 2, an arrangement 200 has a mobile station MS A 202 connected to link 204 to TFO (tandem free operation) PROC A 206. MS A 202 is similarly connected by link 204 to CODEC A

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208 for non-TFO operation, i.e. tandem operation. TFO PROC A 206 and CODEC A 208 correspond to the claimed first processor. MS A 202 corresponds to the claimed first processor.

Summing point 210 is connected by central link 212 to TFO PROC B 216. Summing point 210 will forward the sum of the outputs from TFO PROC A 206 and CODEC A 208. Similarly, summing point 210 is connected to CODEC B 218 for non-TFO operation, i.e. tandem operation. Controlled switch 220 is controlled by TFO PROC B 216. TFO PROC B 216 determines if the present operation is a TFO operation in which case it switches switch 220 to the output of TFO PROC B 216 or a non-TFO operation in which case it switches switch 220 to the output of CODEC B 218. The central wiper of switch 220 is connected via link 222 to MS B 224. MS B 224 corresponds to the claimed second telephone. TFO PROC B 216 and CODEC B 218 constitute the claimed second processor.

Regarding claim 28, as recited in claim 28, MS A 202 and MS B 224 are mobile telephones.

Regarding claim 31, Huh et al. teachings provide method and apparatus for dual tone multiple frequency signaling between mobile stations in tandem free operation (TFO) mode operating on IS-95 standards, which provides compression ratios for digitalized speech.

Regarding claim 58, claim 58 is rejected on the same ground as for claim 27 because of similar scope.

Regarding claim 59, claim 59 is rejected on the same ground as for claim 28 because of similar scope.

Regarding claim 62, claim 62 is rejected on the same ground as for claim 31 because of similar scope.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 29-30 and 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huh et al. U.S. Patent 6,791,976 B2.

Regarding claim 29, in column 3 line 60 via column 4 line 10, because Huh et al. teaches that MS B 224 may be a network interface unit (NIU) acting as a type of hub for many connecting telecommunication units, such as fax machines, computers, answering machines, POTS phone sets, etc., therefore, it would have been obvious for

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one of ordinary skill in the art at the time the invention was made that Huh et al. teachings can be modified to utilize public switched telephone network telephones.

Regarding claim 30, Huh et al. does not teach the switch comprises a software switch as claimed in the application claim. Nevertheless, because software switch is easily implemented and automated, one of ordinary skill in the art at the time the invention was made would have been motivated to implement the software switch.

Regarding claim 60, claim 60 is rejected on the same ground as for claim 29 because of similar scope.

Regarding claim 61, claim 61 is rejected on the same ground as for claim 30 because of similar scope.

***Allowable Subject Matter***

5. Claims 1-26 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, claim 1 is allowed over the prior art of record because the cited references cannot teach or suggest an apparatus arranged to enhance the quality of the communication signal as set forth in the application claim.

6. Claims 32-57 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 32, claim 32 is allowed over the prior art of record because the cited references cannot teach or suggest a method of enhancing the quality of the communication signal as set forth in the application claim.

7. Claims 63-93 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 63, claim 63 is allowed over the prior art of record because the cited references cannot teach or suggest an apparatus arranged to enhance the quality of the communication signal as set forth in the application claim.

8. Claims 94-119 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 94, claim 94 is allowed over the prior art of record because the cited references cannot teach or suggest a computer readable medium encoded with a computer program executable to perform functionality as set forth in the application claim.

**Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCT

*Khanh Cong Tran* 02/01/2006  
Examiner KHANH TRAN